CANADIAN GEOGRAPHICAL JOURNAL

APRIL 1949

Stephenville Crossing, Newfoundland — D. W. Overend

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THE CANADIAN GEOGRAPHICAL SOCIETY

OTTAWA, CANADA

The Society's ambition is to make itself a real force in advancing geographical knowledge, and in disseminating information on the geography, resources and people of Canada. In short, its aim is to make Canada better known to Canadians and to the rest of the world.

As one of its major activities in carrying out its purpose, the Society publishes a monthly magazine the Canadian Geographical Journal, which is devoted to every phase of geography—historical, physical and economic—of Canada, of the British Commonwealth and of the other parts of the world in which Canada has special interest. It is the intention to publish articles in this magazine that will be popular in character, easily read, well illustrated and educational to the young, as well as informative to the adult.

The Canadian Geographical Journal will be sent to each member of the Society in good standing. Membership in the Society is open to any one interested in geographical matters. The annual fee for membership is four dollars (Canadian currency).

The Society has no political or other sectional associations, and is responsible only to its members. All money received is used in producing the Canadian Geographical Journal and in carrying on such other activities for the advancement of geographical knowledge as funds of the Society may permit.

CANADIAN GEOGRAPHICAL JOURNAL

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THE CANADIAN GEOGRAPHICAL SOCIETY

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This magazine is dedicated to the interpretation, in authentic and popular form, with extensive illustrations, of geography in its widest sense, first of Canada, then of the rest of the British Commonwealth and other parts of the world in which Canada has special interest.

The articles in this Journal are indexed in the *Reader's Guide to Periodical Literature* and the *Canadian Periodical Index* which may be found in any public library.

The British standard of spelling is adopted substantially as used by the Dominion Government and taught in most Canadian schools, the precise authority being the Oxford Dictionary as edited in 1936.

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Newfoundland — An Historical Sketch

by N. V. K. WYLIE

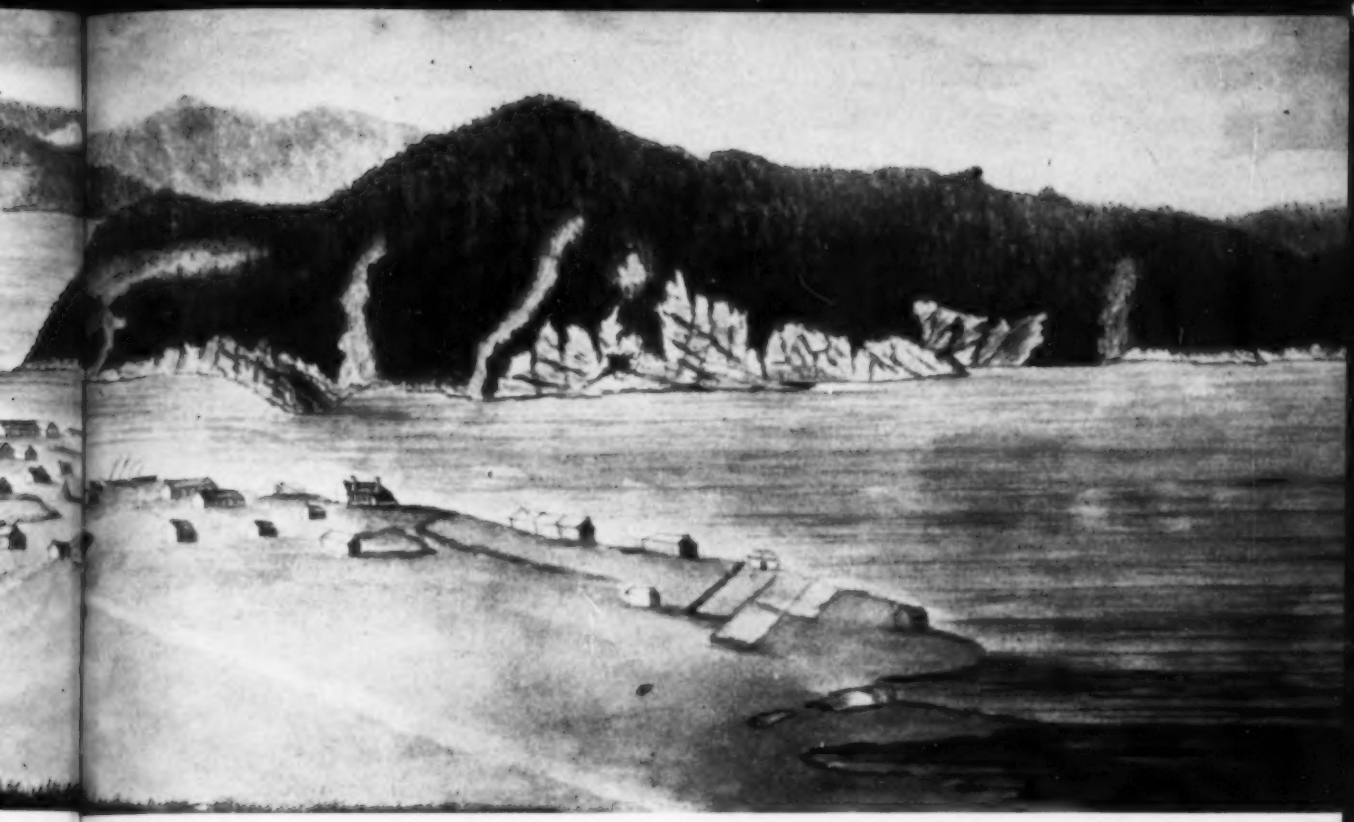
It is not the intention in this brief article to write a complete history of Newfoundland. But if, in some small measure, it conveys to the reader the struggle for colonization and the early abuse suffered by the settlers it will have accomplished its purpose and explained the fierce pride of the Newfoundlander in his homeland. Its history is turbulent and often oppressive, yet in spite of discrimination, war, and the elements, Newfoundland became a self-governing colony of the British Empire. The undeniable tenacity and courage of the Newfoundlanders earned them their island home. It is small wonder their pride burns so brightly today.

On the 24th day of June, 1497, at five o'clock in the morning, John Cabot, having set sail in the *Mathew* from Bristol, England, 53 days before, sighted land. He called the headland on which he landed "Terra prima vista", now named "Bonavista". Some historians claim he landed in Cape Breton, but the weight of evidence seems to discredit this.

Lorenzo Pasqualigo, a Venetian in London, wrote to his brother in Venice on August 23, 1497:

"The Venetian, our countryman, who went with the ship from Bristol in quest of new islands, is returned and says that seven hundred leagues hence he discovered land, the territory of the Grand Cham. He coasted for three hundred leagues and landed; saw no human beings, but he has brought hither to the King certain snares which had been set to catch game, and a needle for making nets. He also found some felled trees whereof he supposed there were inhabitants and he returned to his ship in alarm."

There were inhabitants on the island at the time of Cabot's discovery, but the whole tribe has since died out. Mr. J. P. Howley, in his book on the Beothuks of Newfoundland, has assembled all the known data on



the town, 1786. From a water-colour drawn was Prince William Henry, later William es of Canada.

these unfortunate natives, and he refers to them as a brave and intelligent people. Obliterated by the cruelty of the white man, the last of the Beothuks, a woman named Shanawdithit, died in 1829. She is described as being a well-grown woman, with beautiful features, splendid teeth, and a happy disposition.

The only official recording of the island's discovery is an entry made by Henry VII in the Privy Council accounts which reads: "To Hym that found the new isle £10."

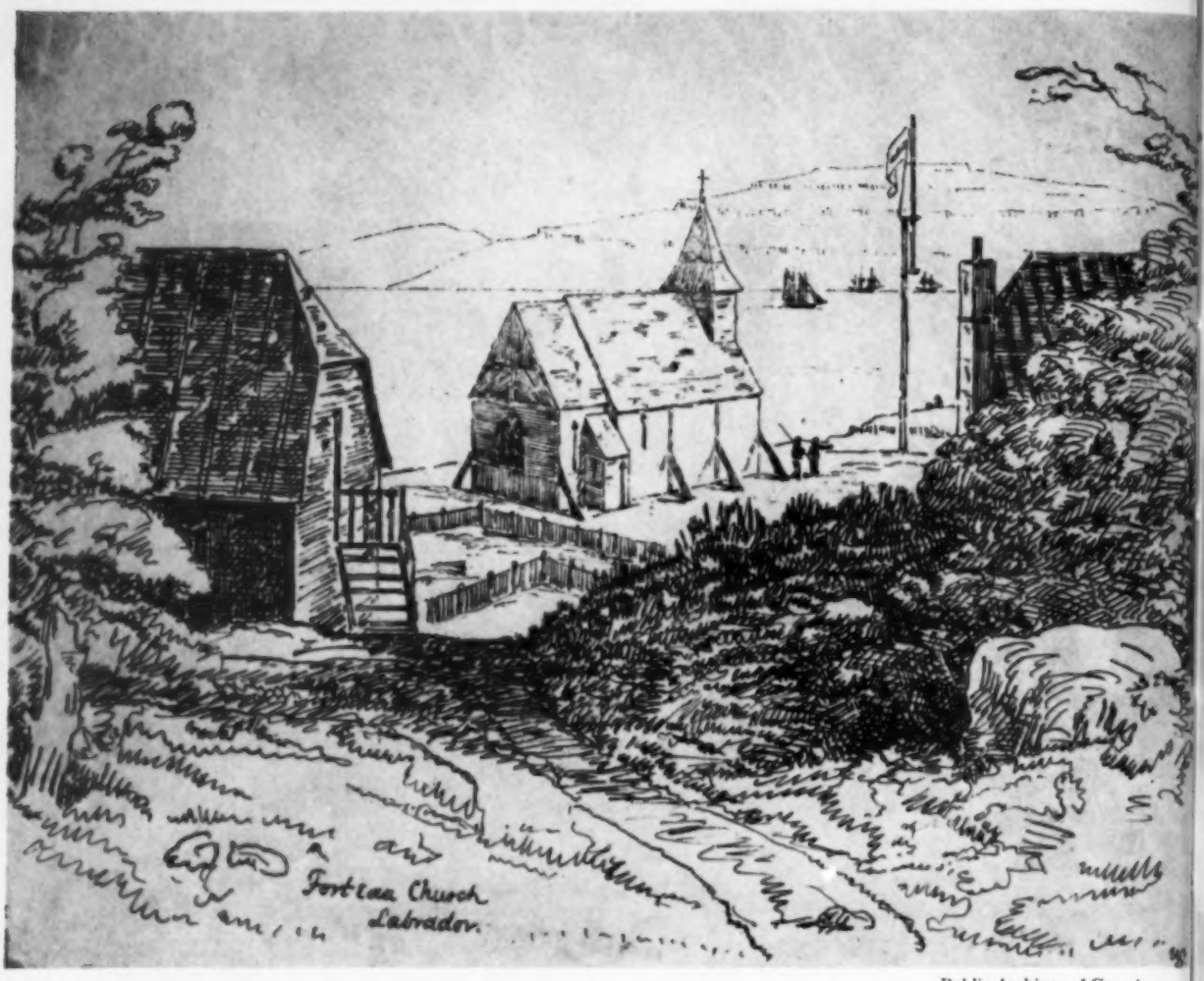
A Bristol chronicler writes: "In the year 1497 the 24th day of June, on St. John's day was Newfoundland found by Bristol men in the ship called the *Mathew*." Nowhere in these records is Cabot's name mentioned —so, among contemporaries, is fame recorded.

Portugal was the first country to establish regular fishing stations on the island. Gaspar de Corte-Real made two voyages to Newfoundland, one in 1500 and another, from which he did not return, in 1501. To him the island owes the names of Conception and Portugal Cove.

In the sixteenth and seventeenth centuries many of history's great and near great visited Newfoundland, some attempting colonization, others from a spirit of adventure. In 1534 Jacques Cartier arrived at St. Catharines, now called Catalina, and from there he went to the Harbour of Raport (Quirpon).

During the whole of this time no effort was made to colonize the island. Fishermen of various nationalities used it as a summer fishing base, returning to their native lands on the approach of winter. Hakluyt writes that in 1578 there were four hundred vessels employed in cod fishing of which only fifty were English, the remainder being Spanish, French and Portuguese.

On the 5th of August, 1583, Sir Humphrey Gilbert, half-brother of the famous Sir Walter Raleigh, read a scroll at St. John's, the capital of the island, taking possession of the island for himself in the name of



Public Archives of Canada

Forteau Church, Labrador, from a sketch made in 1857. In that year "Sketches of Newfoundland and Labrador" was printed and published by S. H. Cowell, Anastatic Press, of Ipswich, England. The descriptive note about this sketch reads: "Forteau Bay is an inlet on the N.W. side of the Strait of Belle Isle. At the head of the bay stands the church, which was consecrated by the Bishop, August 9th, 1857. The scenery around is of a different colouring and character from the rest of this coast; the hills enclosing the valley being of red sandstone, and the eastern point of limestone, abounding in fossil remains."

Queen Elizabeth, and solemnly annexed the new territory to the British Empire. Gilbert's grant gave him jurisdiction over the territory within two hundred leagues in all directions, which grant included Nova Scotia, New Brunswick, and part of Labrador, as well as the islands of Cape Breton and Prince Edward Island.

Gilbert and two hundred and fifty followers from Devonshire were the first settlers of Newfoundland, and from the location of his father's castle in England Torbay gets its name. Gilbert intended to colonize the island and to develop it, as he fully appreciated the value of its fisheries. Unfortunately, however, he lost his life in a storm while returning to England, and his death is considered by many to be one of the deciding factors in the attainment by the merchants and traders of England of a tight grasp on the island's marine wealth.

Another attempt at colonization was made by John Guy in 1610, and again in 1615 Captain Richard Whitbourne was given the task of establishing order among the fishing population, and of correcting certain abuses which had grown up. Whitbourne apparently loved Newfoundland, and a book written by him stimulated great interest in the island among English people, King James ordering

that a copy of it be sent to every parish in the Kingdom. Whitbourne wrote: "What can the world yield to the sustentation of man which is not to be gotten here! Desire you wholesome air, the very food of life? It is there. What seas so abounding with fish, what shores so replenished with fresh and sweet water . . . there to hawk and hunt, where is neither savage people, nor ravenous beasts to hinder their sports."

Following Whitbourne, one of the most skilfully organized attempts at colonization of the island was made by Sir George Calvert (afterwards Lord Baltimore). He acquired the right to the whole southern peninsula of Newfoundland with all the islands lying within ten leagues of eastern shores. He called his Newfoundland province Avalon to perpetuate the memory of the arrival of Joseph of Arimathaea, carrier of the Holy Grail, at Avalon in Somersetshire, where the old Roman town of Verulam was. He established a settlement of this name and it is now known on the island as Ferryland. However, his attempt ended in failure because of the poor quality of the soil, and repeated attacks by the French.

Newfoundland's development from about 1633 to the middle of the nineteenth century is a history of continual struggle against the oppression of stringent English legislation brought about by the greed of monopolists, interspersed with numerous skirmishes with the French.

Legislation of this period prohibited settlement and ordained that all fishermen at the close of the fishing season should return to England. Residents could not legally fence a piece of land or repair a house without a licence, and such licences were rarely granted. The masters of vessels had to give bonds guaranteeing the return to England of per-

Carbonear, with a population of more than 3,000, is the largest settlement in Conception Bay. Though attacked several times in the old days, it was never captured and when the rest of the island was in French hands Carbonear alone withstood the onslaught. The name is derived from charbonnier *(charcoal-burner), charcoal being used as fuel by early settlers from the Channel Islands.*

Ruggles Studio

sons they took out to engage in fishing, and all plantations in Newfoundland were to be discouraged.

Lord Salisbury once referred to Newfoundland as: "The sport of historic misfortune", and it is sufficient tribute to the determination of the settlers that they managed to remain on the island at all. This bitterest of legislation put every obstacle in the way of colonization of the island while it was being encouraged by every means on the mainland of the North American continent.

Government was at first by Fishing Admirals who held office by virtue only of being the first to arrive to carry on fishing for that season. They had little else to recommend them. Later, governors were appointed by England; but for many years they stayed only for the summer months.

Yet the population increased, and in 1832 a form of representative government was conferred on the island, and in 1855 full responsible government was granted. This continued until 1934 when a form of Commission of Government was set up, which existed to the time of confederation.

To add to the difficulties set out above, Newfoundland was the scene of sharp conflict between the English and the French. In 1635 the French obtained permission to dry fish on the shores of Newfoundland and in 1660 they founded a colony at Placentia. In 1694 the French captured all settlements in Newfoundland except Carbonear and Bonavista, and before they were dislodged the Treaty of Ryswick was signed which only restored the parties to their pre-treaty positions.

In 1708 the French again assailed St. John's and this time Carbonear was the only settlement which withstood their onslaught. The rest of the island was in French hands. The Treaty of Utrecht in 1713 restored sovereignty of the island to England, but left many fishing rights in the hands of the French. In 1793 the last attack by the French was made on the island, and the settlement of Bay Bulls was burnt and plundered. The Treaty of Versailles in 1783 modified French fishing rights, but granted to them rights to fish on the north and west coasts from Cape St. John northwest to Cape Bauld and south to Cape Ray. Thus again the British were excluded from the beautiful Bay of Islands, the fertile shores of Cape St. George and Bonne Bay. These fishing rights have always aroused a feeling of strong resentment among Newfoundlanders, and it was not until 1904 that claims to the "French Shore" were finally relinquished in return for cession to France of British territory in Africa. The islands of St. Pierre and Miquelon remained French territory.

Two other events are worthy of mention even in so brief a chronicle. Towards the end of 1901, on Signal Hill, which overlooks St. John's, Marconi received the first wireless message from across the Atlantic. Cabot Tower stands at the spot where this important event in the world's system of communication occurred. In 1927 Labrador was awarded to Newfoundland by a decision of the Judicial Committee of the Privy Council. Even today little is known of this area. Only a coastal fringe is settled and even that but sparsely. In area it is nearly three times that of Newfoundland's 42,734 square miles. Undoubtedly it is rich in forests and water power and iron ore and it may contain other mineral resources.

By their courage and perseverance against odds of nature, war and political intrigue which would have dismayed lesser men, Newfoundlanders have seen their island progress from "The sport of historic misfortune" to the "Gibraltar of North America". Today Canada proudly welcomes this tenth province, and the hope of one united land extending from the Pacific to the most eastern point of the New World in the North Atlantic has become reality. It is only fitting that we should quote from the Ode to Newfoundland:

> As loved our fathers, so we love,
> Where once they stood we stand,
> Their prayer we raise to heaven above,
> God guard thee, Newfoundland.

Newfoundland Pictorial

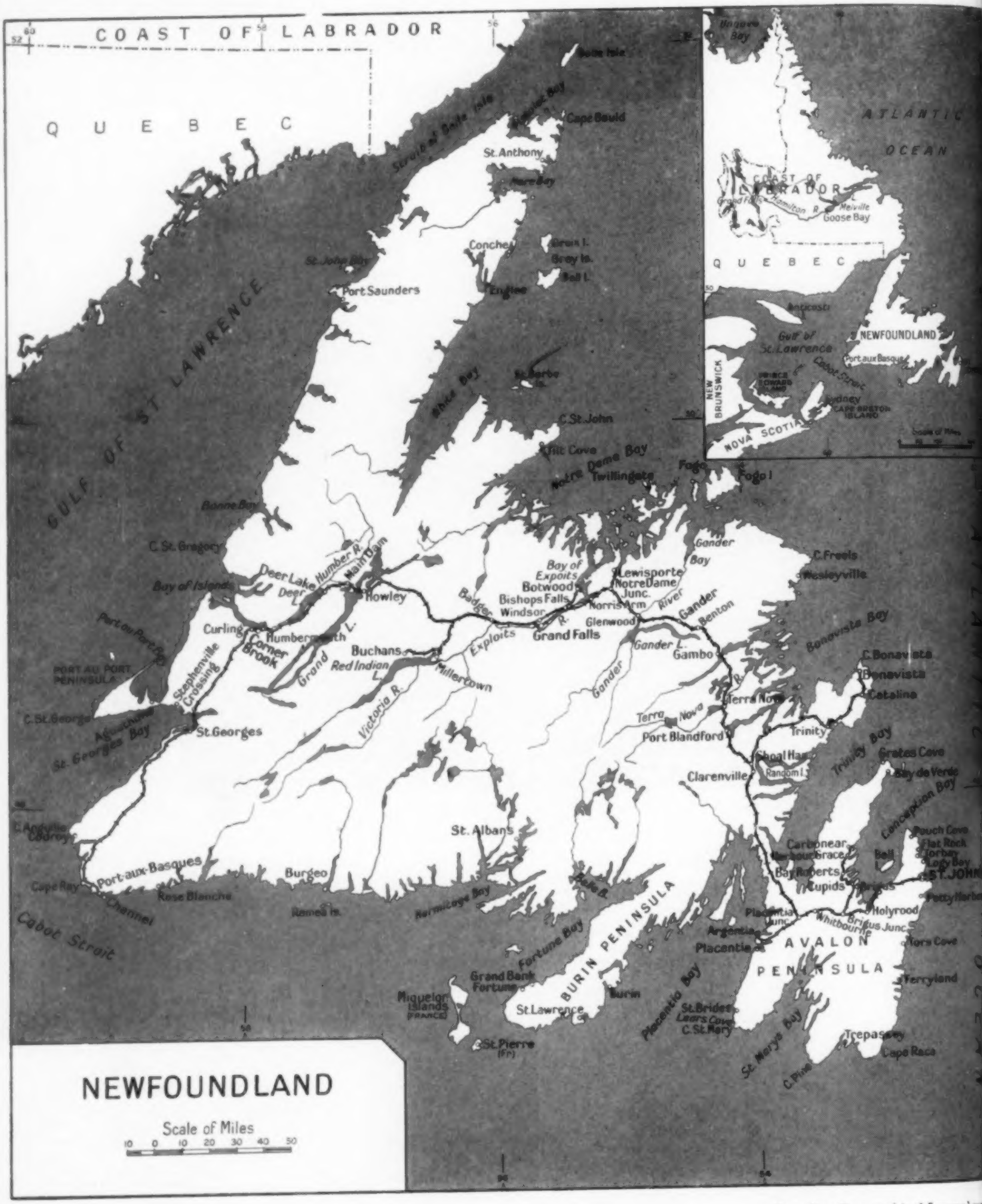
From multiple sources pictorial subjects have been selected to provide intimate glimpses of the Newfoundland of yesterday and today, depicting, with the explanatory text, the character of the country and the life and interests of its people—the people whom we are now privileged to call Canadians.*

D. W. Overend

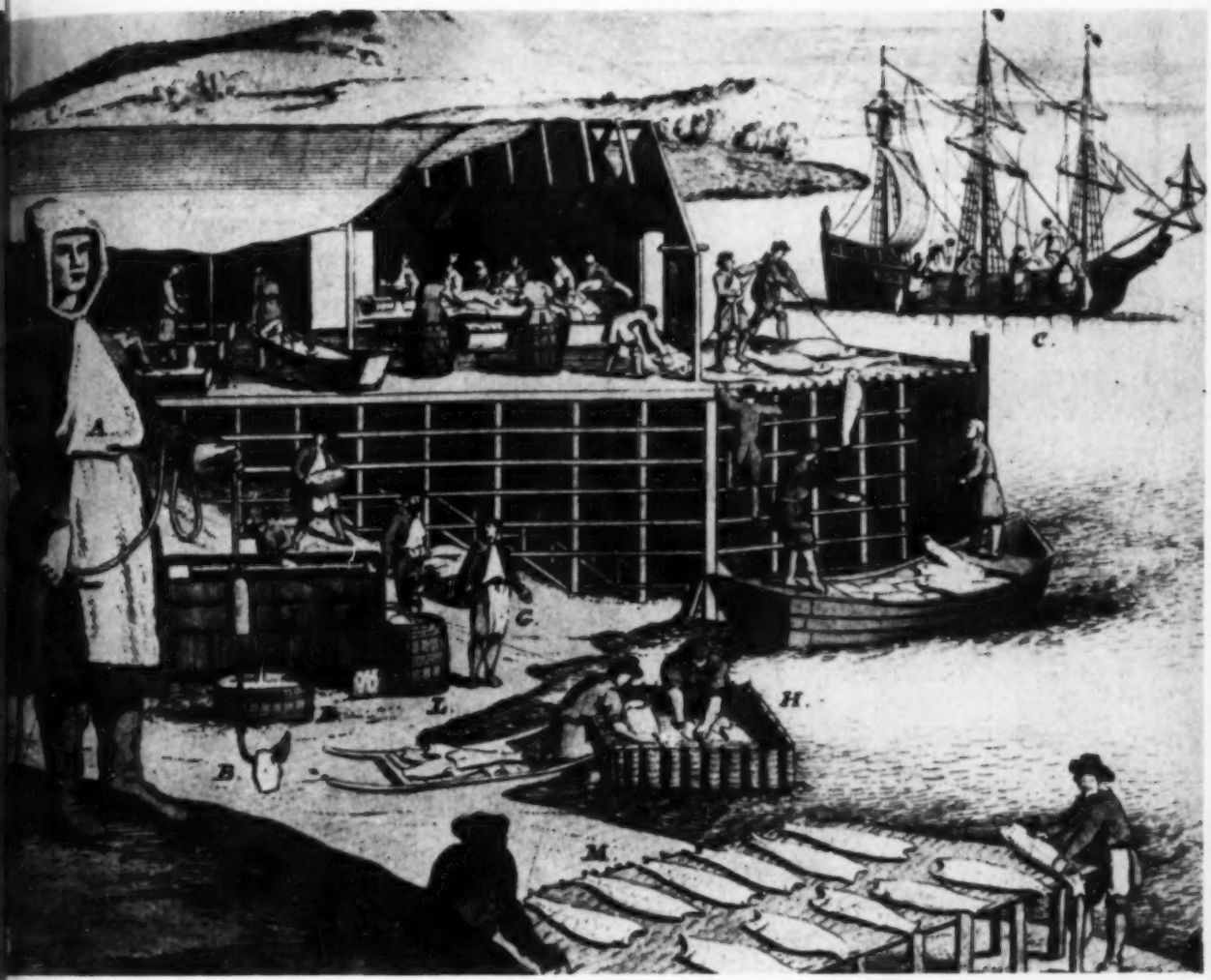
Torbay, above, is a picturesque fishing village, not far from St. John's on the east coast. This colour photograph shows a typical fish stage, propped against the face of the cliff by long piles. The fish are raised by pulley from the boats into the shed where they are cut up, cleaned and put in brine. Later they are taken out and dried on racks or "flakes". The colour of the ocean in this bay varies from deep blue to deep green, but is always intense.

COVER SUBJECT:—The photograph on the cover is of Stephenville Crossing, a fishing village in St. Georges Bay on the west coast. River water and sea water mingle in the inlet, with the result that fishermen are able to take both freshwater and saltwater fish. The village lies on the railroad between Cape Ray and St. Georges; the houses in the picture back on to the waterfront and face the railway track which runs through the main street.

*See also the Newfoundland booklet of the Provincial Geographical Aspects series for a more comprehensive account.



Canadian Geographical Journal map



Public Archives of Canada

The Cod Fishery

The basis of Newfoundland's economic life for almost four centuries has been the fishing industry and, in that industry, one product has been all-important—dried cod.

The picture above, from an engraving which adorned a map of North America prepared by Herman Moll, Geographer, and published within the period 1712-1714, shows how little methods have changed through the years. This engraving tells a complete story, the key to which reads as follows:

> A View of a Stage & also of ye manner of Fishing for, Curing & Drying Cod at NEW FOUND LAND. A. The Habit of ye Fishermen. B. The Line. C. The manner of Fishing. D. The Dressers of ye Fish. E. The Trough into which they throw ye Cod when Dressed. F. Salt Boxes. G. The manner of Carrying ye Cod. H. The Cleansing ye Cod. I. A Press to extract ye Oyl from ye Cods Livers. K. Casks to receive ye Water and Blood that comes from ye Livers. L. Another Cask to receive ye Oyl. M. The manner of Drying ye Cod.

In modern times the stage may be called a "room" or "plantation" but its structure is much the same; the "pound" (H) in which the fish were washed prior to drying is still used, and spreading the fish on racks or "flakes" to dry (M) remains the common method.

Marshall Studios

Off the southeast coast lie the Banks, a submerged upland, part of the continental shelf fringing the Atlantic seaboard. For centuries the Banks have provided a rich harvest of fish. In winter the hazards faced by the bankers are increased by the weight of ice which encumbers the vessels. The crew of this Newfoundland trawler photographed on the Grand Bank in March are battling against the ice which might capsize their banker.

Marshall Studios

A haul of cod on the Grand Bank (above). Following the trend for modernization of the fishing industry, this vessel is an iron trawler, many of which now operate from Newfoundland ports. Much of the fishing on the huge swells of the Banks is done from small two-man dories carried on the bankers.

A recent innovation is an artificial drying plant for fish. The dryer pictured below, first to be established on the island, is at the village of Fortune on the Burin Peninsula. In front of the plant are fish spread out on flakes to dry in the traditional manner.

Marshall Studios

The Settlements

More than ninety per cent of the Island of Newfoundland's population of some 316,000 live on the coast, the remainder in forestry and mining communities in the interior. There are about 1,300 settlements scattered along the six thousand miles of jagged shoreline in sheltered harbours and coves. The Avalon Peninsula in the south-east is the most thickly settled district, holding about forty-five per cent of the population. Outside the capital, St. John's, the only centres with populations of more than five thousand are the mining community of Bell Island (where the iron ore mines run out beneath the waters of Conception Bay), and the pulp and paper communities of Grand Falls and Corner Brook. The small settlements, often quaintly named, range from a few families to several hundreds. In many of these isolated communities the people have retained the customs, speech and outlook of their forefathers, some of whom came to the island as long as three hundred years ago.

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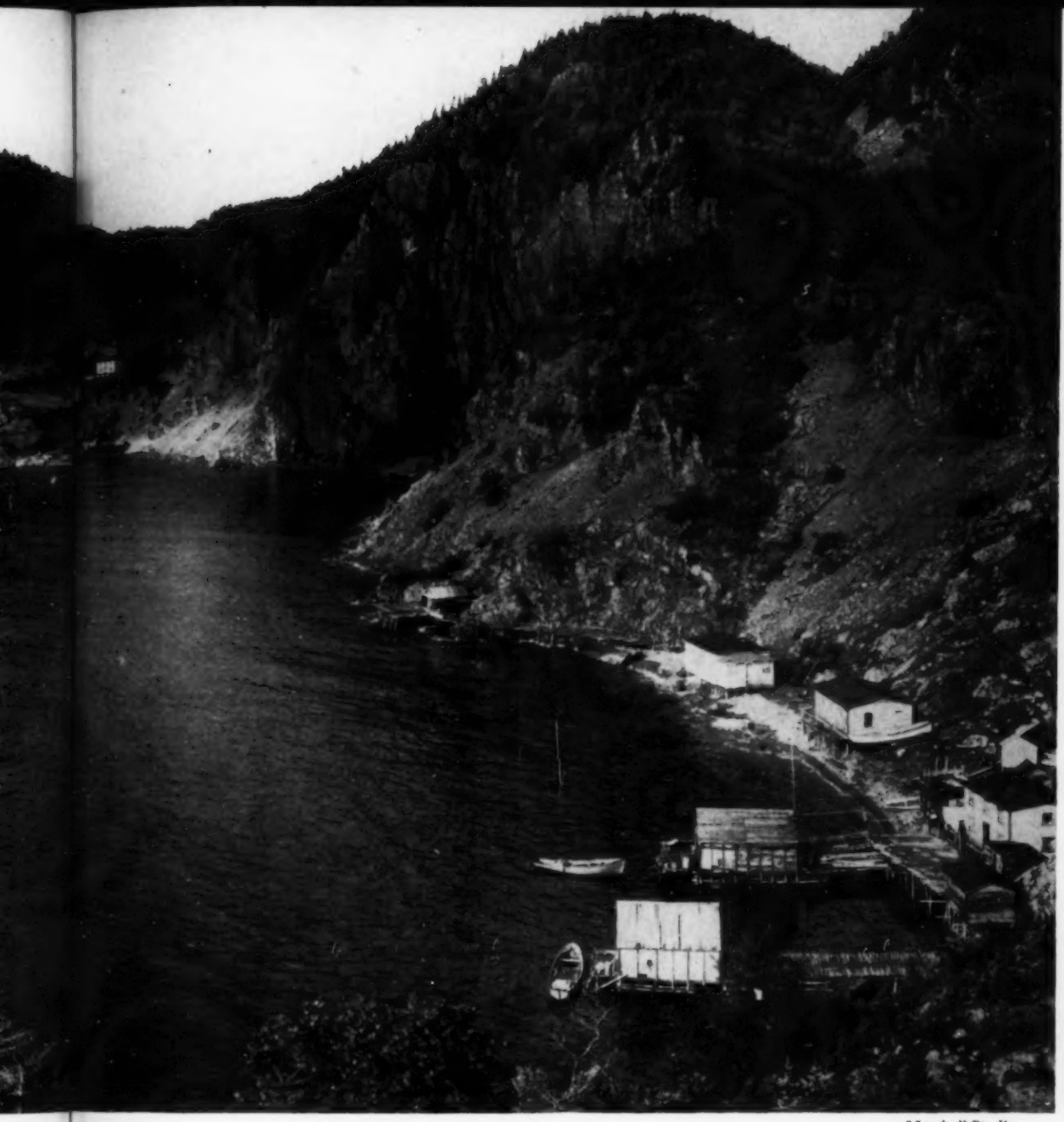

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Snooks Arm (above) on the north coast is a fishing settlement not far from Tilt Cove in Notre Dame Bay. Here deep water comes close to the tree-clad hills which shelter the fifty or so people who live in Snooks Arm. Pushthrough (left), whose name derives from its obvious navigational problems, is a village in Hermitage Bay on the south coast whose people depend entirely on the fishery for their livelihood. Arable soil is completely lacking but there is a good business in fishing and lobstering. In addition to Newfoundland's most important fish, the cod, valuable quantities of herring, lobster and salmon are caught.

N.F.B.

Like children anywhere, the youngsters at Petty Harbour (below), south of St. John's, find fishing an absorbing occupation.

N.F.B.

Many place names are reminiscent of the days when Frenchmen, Spaniards and Portuguese competed with the fishermen from the west of England for the rich fishing grounds of the new land. Three years after John Cabot had claimed the land for Henry VII, Gaspar Corte-Real, exploring the North American coasts in 1500, discovered and named Conception Bay and Portugal Cove (shown above as it appears today); he was then appointed Portuguese governor of Terra Nova.

The northern outport of Englee (top of next page) is one of the largest settlements on the old "French Shore". An important fishing port dating back probably to the sixteenth century the settlement now has a modern freezing plant where fresh salmon and cod fillets are handled. At Englee have been found many implements and skeletal remains of the native Beothuk Indians of Newfoundland who truly merited the name Red Indians from their custom of smearing themselves and their possessions with red ochre. They were described by John Guy

Marshall Studios

who traded with them in 1612 but during the following two centuries they were hunted and slain by white fishermen and Micmac Indians from Nova Scotia until with the death of the last Beothuk in 1829 the tribe became extinct.

Kings Cove (below) is an historic fishing settlement in Bonavista Bay. According to ancient tradition it was here that John Cabot landed in 1497 and raised the King's flag.

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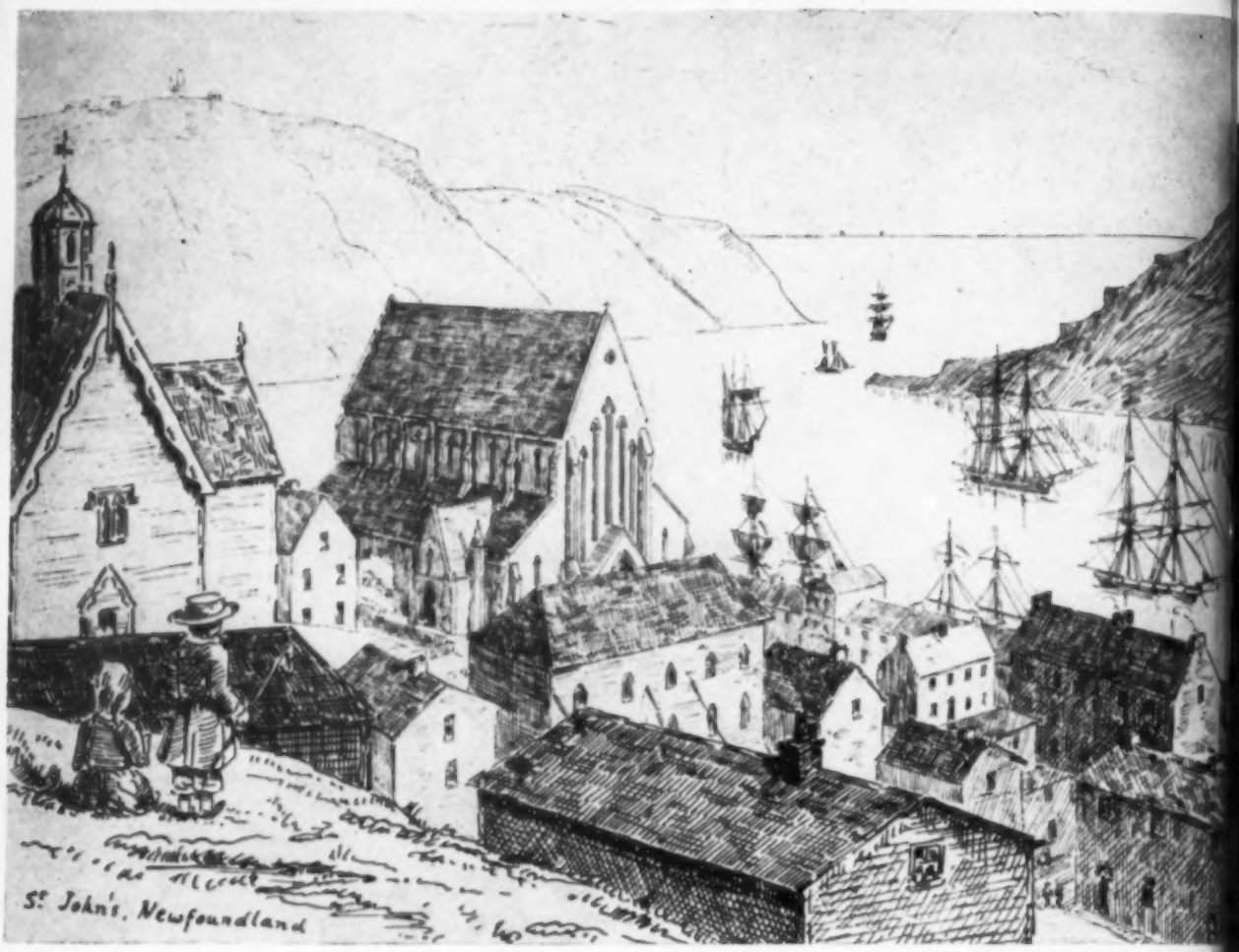

Public Archives of Canada

The Capital — St. John's

St. John's on the Avalon Peninsula is the capital of Newfoundland and one of the oldest cities in the New World. It was first settled by Devonshire fishermen early in the sixteenth century and has had a turbulent history. After being twice sacked by the French, it was captured by them during the Seven Years War, but recaptured in the same year, 1762, since when it has remained in British possession.

The tribulations of St. John's did not cease in the nineteenth century, for the old city, built entirely of wood, was twice destroyed by fire, in 1816-17 and in 1846. Again in 1892 half the rebuilt city was burnt.

The illustration above is from a sketch made in the summer of 1857 (Cowell, Sketches of Newfoundland and Labrador) looking from the hill near Fort Townshend across the harbour to The Narrows and the ocean beyond. The Church of England Cathedral forms the centre of the sketch, the nave only being completed, to the design of Sir Gilbert Scott. The nave, on the site where an Anglican church had stood as early as 1720, was dedicated by Bishop Feild in 1850. It was not until 1885 that the Cathedral, except for the towers, was completed, and seven years later it was burnt to a hollow shell by one of St. John's disastrous fires. After rebuilding, the church as it now stands was completed in 1905. The interior view shows the Cathedral as it is at the present time.

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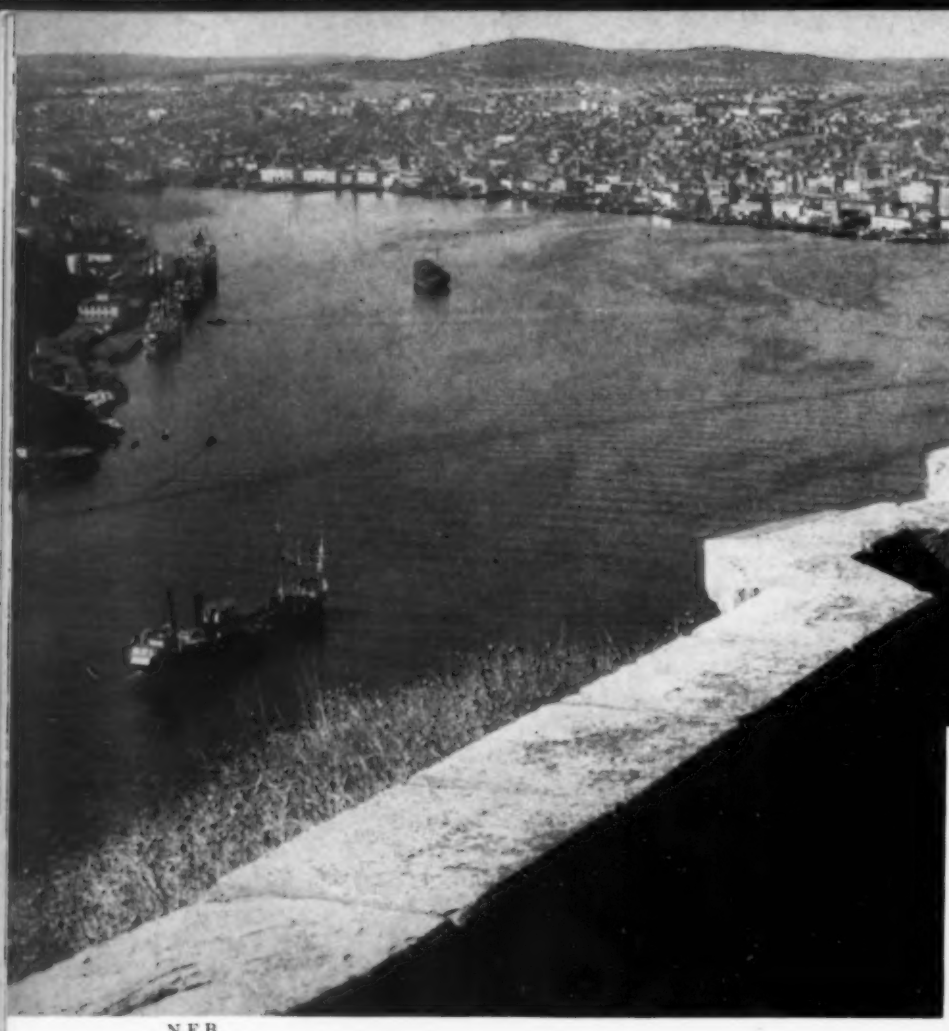
Ruggles photograph courtesy of Newfoundland Tourist Office



N.F.B.

An aerial view of down-town St. John's and the water-front (right). Besides being a busy seaport, St. John's, with a population of about 57,000, is the heart of the commercial and financial life of the province. The old city was built of wood but more substantial buildings were erected after the fire of 1892. Behind the open plot of ground (upper right) stands the Church of England Cathedral. St. John's has two cathedrals (Roman Catholic and Anglican) as well as many other churches. The principal denominations in the island are Roman Catholic, Anglican and United Church. In the view from Signal Hill (above) can be seen the twin towers of the Roman Catholic Cathedral which dominates the heights of St. John's. This building was completed in 1855 and escaped the fire of 1892.

The city and harbour of St. John's from Signal Hill (left). The vessel some 500 feet below the hill has just come through The Narrows to enter the well protected harbour. This harbour was the New World headquarters of the British fleet during the American War of Independence and the War of 1812, and was an important naval base, controlled by the Royal Canadian Navy, in World War II. The old cannon in the foreground were used during the French occupation. On top of the hill, but out of view, stands Cabot Tower, where in 1901, Marconi received the first wireless signal transmitted across the Atlantic.

Ruggles Studio

Canadian Pacific Air Lines courtesy Bowater's

Corner Brook and the Paper Industry

Corner Brook, second largest town in Newfoundland, is the centre of the island's second industry, the production of paper. Situated at the mouth of the Humber River on the west coast, Corner Brook is in the main a modern community which has grown as the importance of its industry has developed. From a village of some 250 inhabitants in 1923 it has, with the advent of the paper mill, grown to a thriving town of nearly 9,000 people.

The pulp and paper industry of the island is of recent origin, the first paper mill having been erected at Grand Falls on the Exploits River during the first decade of this century. So rapid has been its development that exports of paper and forest products now slightly exceed in value those of fishery products. The fisheries remain of prime importance, however, since it is estimated that the welfare of over half the island's population depends on the fishing industry.

In the centre of the aerial view can be seen the great pulp and paper mill, one of the largest paper-making units in the world, with stockpiles of pulpwood alongside and booms of logs in the river.

Winter and summer the pulp and paper mill (shown at the top of the opposite page) is busy and with the recent installation of new machinery it will be producing around 350,000 tons of newsprint a year. The photograph at right shows a tractor, equipped with snow-plough, on the winter trail towing sleds laden with supplies for the logging camp where wood is cut for the mill.

Bowater's

Marshall Studios.

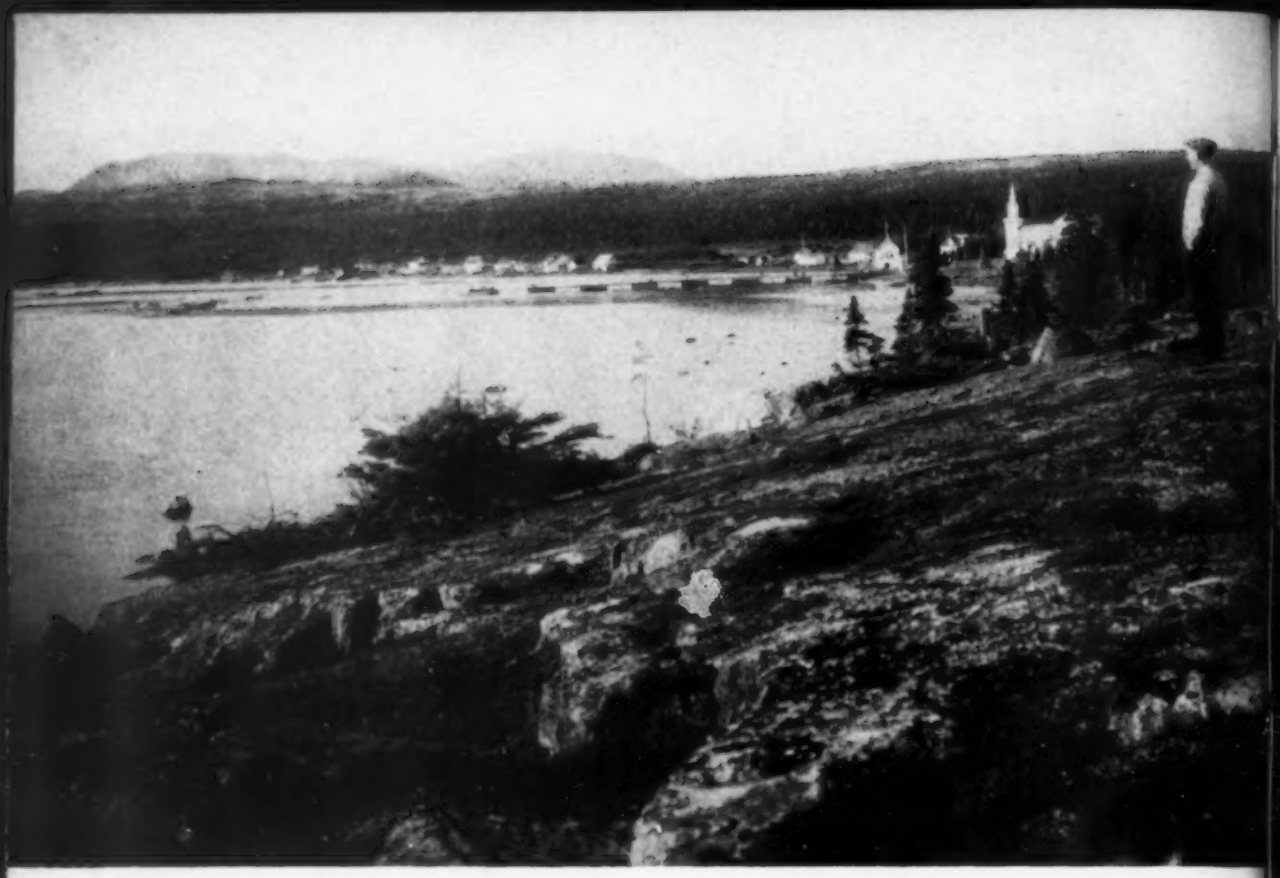
Canadian Pacific Air Lines courtesy Bowater's

Marshall Studios

The interior of this island of 42,734 square miles is a network of rivers and lakes set in undulating country with low, rocky prominences. Only on the west coast are there mountains, which rise to more than 2,000 feet. Much of the country is barren or swampy but in the principal river valleys and along the west coast are found the forests of balsam fir and spruce which furnish the raw material for the pulp and paper mills. There is abundance of trout in the lakes; moose and caribou are plentiful in the forests; smaller game is to be found in all parts of the country, and some of the rivers provide excellent salmon and sea trout fishing. The largest rivers are the Gander, the Humber, and the Exploits. The Humber River in the west (photograph above) is noted for its salmon as well as for being a waterway to supply the mills at Corner Brook.

The upper photograph on the opposite page shows the logging centre of Hampden at the head of White Bay. Wood from the northern forests was formerly shipped from Hampden all around the northern peninsula to Corner Brook. Now it is bundled, loaded on to trucks, as shown in the picture, and taken to Sandy Lake whence it is floated down the Humber River on its way to feed the hungry mills, from which it will emerge as newsprint.

Deer Lake (left) is on the Humber River some thirty miles from Corner Brook. The hydro-electric power station (centre) furnishes power to operate the Corner Brook mills.



Labrador

Labrador, separated from Newfoundland Island by the Strait of Belle Isle, bounded on the east by the Atlantic and on the west and south by the Province of Quebec, comprises some 110,000 square miles of comparatively unknown territory. Its name is becoming familiar to many transatlantic air travellers who land at the great airport, built by Canada during the war, at Goose Bay where the Hamilton River empties into Lake Melville 130 miles from the sea.

The climate is rigorous, since the shore is washed by the cold Labrador Current from the Arctic, but there are a number of settlements along the much-indented coast. The staple industry is fishing, mainly cod-fishing, though some salmon and trout are taken. Furs furnish a second source of income for the inhabitants. Potential resources lie in timber suitable for the manufacture of paper, minerals, and the development of hydro-electric energy from the water power available.

The photograph above shows the village of Makkovik, almost on the 55th parallel, where a wireless telegraph station is maintained. This outport, a good centre for fur trapping, was established by the Moravian Mission. The rocky terrain and cold climate severely limit agricultural possibilities. The church, which can be seen in the photograph, was prefabricated and shipped out in sections. It was put together in Makkovik and the first service was held on Christmas day in 1897.

At the right is a view of Bowdoin Canyon, just below Grand Falls on the Hamilton River, 230 miles up-river from Lake Melville. The Falls cut into the 400-foot canyon from the right, where the spray obscures the view. With a drop of 245 feet, these falls are nearly a hundred feet deeper than Niagara Falls and there are rapids for four miles above and twelve miles below, making a total drop in the river from above the rapids to the end of the canyon of 1,038 feet—a source of enormous power.

G. H. Desbar

Photographic Survey Co. Ltd.

For many years past Canadian geologists and surveyors have been exploring the virgin country of the Quebec-Labrador boundary area, searching especially for mineral resources. Many discoveries of iron ore have been made and recent surveys have revealed reserves estimated at more than three hundred million tons of iron ore, all found from surface outcrops which will be accessible to open pit mining. It is also considered that there are good prospects for finding non-ferrous base metals—copper, lead, and zinc—below the overcast. Plans are being made to develop mining operations in the area some 350 miles north of Seven Islands on the St. Lawrence River, the first requisite being to build a railway through unbroken country over which machinery can be taken in and ore hauled out to a shipping point. The aerial photograph shows the character of the terrain of the rich iron ore deposits in the region of the western extremity of Labrador. In the centre is Burnt Creek Camp, the main camp of the Labrador Mining and Exploration Company. Timber is sparse and there is no vegetation on the hill-tops which rise to about 600 feet. In some of the sheltered valleys enough timber is found for camp buildings. The trees in the picture are black spruce, ranging from eight to thirty feet in height, and approximately 100 years old

J. L. Francine

Labrador has a very small permanent population, estimated at some 5,500, augmented by a certain number of fishermen from Newfoundland during the fishing season. The majority of the population are white settlers, but a few hundred Eskimos live along the northern coast and there are some small bands of Naskapi-Montagnais Indians in the interior. Seals and waterfowl are taken along the coast, and animals in the interior which furnish furs, hides and food include moose, bear, caribou, deer, wolves, beaver, otter and mink.

The photograph above is of Naskapi Indians at their camp. Below is an octogenarian Labrador fisherman and (right) an Eskimo mother with her child, at Nain.

A. J. Walsh speaking in the Senate Chamber, Ottawa, on December 11, 1948. Seated at the table are the representatives of Canada and Newfoundland.

Seated behind the Canadian representatives at the left of the table is the former Prime Minister, Mr. Mackenzie King, who, on the Canadian side, initiated the negotiations for union.

N.F.B.

A Mari Usque Ad Mare

At the concluding Plenary Session of the meetings between the Official Delegation from Newfoundland and the representatives of the Government of Canada on December 11, 1948, the agreed terms of union by which Newfoundland would become the tenth Canadian province were signed. Speeches were made on this occasion by the Prime Minister of Canada, the Rt. Hon. L. S. St. Laurent, and the Chairman of the Newfoundland Delegation, the Hon. A. J. (now Sir Albert) Walsh, extracts from which are printed below.

Mr. St. Laurent

THE ENTRY of Newfoundland into Confederation will, I am confident, be of mutual advantage to both parties. When, over eighty-one years ago, the plans for the union of the British colonies of North America were being drafted, the problem of defence and security was in the minds of a good many people who favoured union. During two wars, Canada and Newfoundland have worked in exceedingly close co-operation for mutual defence and the achievement of victory. The question of defence and security is very much in our minds again today. With Newfoundland forming the tenth province of Canada, I think that both we in Canada and you in Newfoundland will feel more secure than heretofore in this troubled world.

Union will bring our two peoples much closer together. That, to my mind, will be its most important consequence. Already we have much in common. We enjoy the same heritage. We have the same political traditions. We are certainly not strangers to each other. Now we shall be able to cultivate to the full our old associations and to build new ones. As Mr. Bradley said when the delegation from the National Convention came to Ottawa in June, of 1947, "should

Newfoundland become the tenth province of your Canadian Union, you will be receiving as a partner a proud people eager and determined to pull their weight in generous measure". Canadians are equally "eager and determined to pull their weight".

Canada has made tremendous strides in the eighty-one years that have passed since the four original provinces joined in Confederation on July 1st, 1867. We are a united people. Our strength, both physical and economic, has increased many fold. We are prosperous. But we have not ceased working for an ever-brighter future, with increased well-being and security for our people. In Confederation, the people of Newfoundland will share all the advantages now enjoyed by the rest of the Canadian people of whom they will then form a part.

Mr. Walsh

The signing of this important document is of great historic significance. The provisions of the document as a constitutional instrument will probably be examined and construed by courts on many occasions; its financial provisions will probably form the basis for claims and counter-claims. Its great importance, however, lies in recording an agreement between representatives of two countries to unite into one great country with a common citizenship for its people who will in the strength of unity stand together and face the future with confidence. The occasion is one of particular significance because of the failure of efforts to bring about union on former occasions with the result that Newfoundland stood alone on the eastern seaboard of a great country which expanded and grew in size and importance. This occasion marks a necessary and important step towards the final realization of the vision of the Fathers of Confederation, who saw a great new nation standing astride the northern half of the continent. With approval by your Parliament and the Government of Newfoundland and confirmation by the Parliament of the United Kingdom, this vision will be fully realized on March 31st, next.

For a large number of the people of Newfoundland the union will mean changes. While many look forward with confidence to a great future in this union, many feel that the destinies of Newfoundland could best be worked out by the people of Newfoundland themselves standing as a separate entity in the world. As in many other agreements of this kind, much depends upon the desire of both sides to make the arrangement succeed. The people of Newfoundland will undoubtedly obtain many benefits from this Union; they will also make a great contribution to the further development of Canada.

We, representatives of Newfoundland, are proud of our participation in this great event. We assure you that Newfoundland and her people will play their part as citizens of Canada and we place great faith in the obvious desire of your Government and your people that our country and our people will find a prosperous and happy place in this great union.

Signing the terms of union: Rt. Hon. Louis S. St. Laurent (left) and Hon. A. J. Walsh. Standing (l. to r.) are: Hon. Milton F. Gregg, Hon. J. J. McCann, Hon. Brooke Claxton, Canada, and F. G. Bradley, G. A. Winter, Philip Gruchy, J. R. Smallwood, J. B. McEvoy, Newfoundland.

The inkstand on the table was used at the Quebec conference in 1864 by the original Fathers of Confederation, whose vision of confederation is now completed.

Sugar making in Canada, from a drawing by Henri Julien, in Canadian Illustrated News, *May 26, 1877.*

Maple Sugar

by MARIUS BARBEAU

DURING THE PAST three hundred years, many changes have marked the evolution of maple-sugar and maple-syrup making, most of these during the lifetime of surviving "old-timers". The industry at first was largely confined to domestic utility, and no great demand existed for a supply that exceeded home use. But a rapidly growing maple consumption has fostered, in the past fifty years, an important seasonal industry.

Only a small proportion of the maple trees in Canada are tapped yearly by less than 50,000 farmers, whereas the same exploitation in the states to the south is relatively more than twice as heavy. Over 9,000,000 pounds of sugar and 2,000,000 gallons of syrup, in 1936, were produced in Canada alone, for an income of nearly $4,000,000. The corresponding revenue of the neighbouring American states for the same year was $3,500,000. Twelve years later, in 1947 (according to the Bureau of Statistics, Ottawa), the production of sugar had fallen back to 3,434,000 pounds, but that of syrup had increased to 3,580,000 gallons; and the total value of both had jumped to $14,139,000 — more than three and a half times as much as twelve years before. Further progress in revenue is forecast. Of the Canadian total for 1936, about 75 per cent came from the Province of Quebec, and, within Quebec, mostly from Beauce, Brome, Missisquoi, and Shefford

At top:—The maple-sugar camp (in the neighbourhood of Longueuil, south of Montreal, about 1848). From a painting by Cornelius Krieghoff.

counties.* The 24 per cent produced in Ontario comes mainly from the eastern counties—Glengarry, Leeds, and Lanark.

The modern marketing of maple products on a large scale, with up-to-date equipment and methods, makes one forget the humble beginning of the industry. At first only the Indians were interested in the maple tree for its sweet sap, which they either froze, evaporated or boiled into syrup. Very slowly did the French Canadians avail themselves of this natural resource, as they did also of other native pursuits, improving upon their models. Much later the British and American settlers tried to industrialize it, only to revert to indifference after failure.

After *La Seine* and other ships had been captured by the British on the high seas, French imports were not available to the Canadian settlers along the St. Lawrence from 1703 to 1705. Thrown back upon their own resources, the colonists endeavoured to be self-sufficient in handicrafts, utilizing the natural products from the forest and the soil. Among those endowed with personal initiative, none was more industrious and clear-sighted than Mme de Repentigny. Not only did she revive or expand home weaving, but she seems to have been the first to appreciate the value of the maple tree to an economy under duress. She stated, without exaggeration, that 30,000 pounds of sugar were made annually on the Island of Montreal and in the neighbourhood — most of it undoubtedly by the Indians. And she added, in writing, "It is not refined (*raffiné*) as the sugar from the American Islands, but is obtained through an incision made into the trees which serves as long as the sap flows. White sugar which is marvellous for the stomach is also made from the cottonwood (*cotonnier*)."

Forty years later, in 1744, the Jesuit historian Charlevoix, in his *Journal d'un Voyage* . . . , vol. V, returned to the same topic, with a wish that maple sugar be made to compete with cane sugar. He wrote:

> The people here treat one with maple sap; it is now the season when the sap flows from the trees. It is delicious, admirably refreshing, and very pure . . . Our maple trees in France might perhaps also yield sweet sap if we had as much snow, and if it lasted as long as in Canada . . . One thing about it is certain—that the Indians before the colonists arrived here, did not know how to make sugar.† They were satisfied after they had boiled the sap two or three times, to thicken it into a syrup, which was tasty enough.

After he had described the current ways of reducing the sap into sugar, he concluded:

> When carefully made, this sugar is very sweet—much more so than ours, and it is soothing to the stomach; it causes no burning pains. Its preparation, besides, involves almost no cost . . . I have given some of it to a sugar refiner of Orléans (in France) who, after melting it down, found no other fault with it than that it had not been sufficiently drained of its liquid contents. In his opinion it was of better quality than cane sugar, and he made it into cakes. One might object that if it had been so good, it would already have been taken up as a trade article. But the people really do not make enough of it for exportation, and in this they may be wrong. There are many other things in this country that are likewise neglected.

The British and American colonists, except for buying what the Indians brought to them in the spring, overlooked this valuable resource still more than their northern neighbours in Canada, until the War of Independence stopped sea traffic and intercepted their supplies of imported sugar. A serious attempt, after 1790, was then made by Benjamin Rush and a few others to establish the maple sugar industry on a scientific and stable basis in the new states of the Union. Even in our time the lengthy letter of Rush to Thomas Jefferson, then Secretary of State, may be considered a good dissertation on this subject. It shows what a clear vision this patriot and early man of science had of economic potentialities; indeed, it is only now, 150 years later, and after the destruction of most of the maple forests, that his dream is becoming a reality.

Before, during and after the Revolution, people on both sides of the Atlantic dreamed of satisfying the need for sweets from maple-sugar trees. Hedrick (*A History of Agriculture in the State of New York*, 1933, pp. 146 et seq.) has recently written: "These idealists

*The figures for this seasonal industry vary considerably from year to year, since production depends on the weather and the length of the season. The Bureau of Statistics of the Province of Quebec, drawing its information from the corresponding federal bureau, has issued the following comparative figures for 1931 and 1941: Number of producers—25,955 (1931), 25,350 (1941); number of maple trees tapped—20,920,602 (1931), 21,348,698 (1941); average number of trees tapped per producer—806 (1931), 842 (1941); gallons of maple syrup produced—969,607 (1931), 1,535,241 (1941); pounds of maple sugar—4,626,968 (1931), 2,423,818 (1941); income from syrup—$2,161,270 (1941), from sugar $351,613 (1941); total income from syrup and sugar—$2,006,227 (1931), $2,512,883 (1941). Hon. Cyrille Vaillancourt, in his short article "L'Industrie de l'érable" (*Sélection du Reader's Digest*, April 1948, p. 137), has given the following estimate: "In 1851, the maple-sugar harvest amounted to about 13,500,000 pounds; in 1947, to 39,000,000. The Province of Quebec furnishes 85% of the annual production, and four-fifths of the total manual labour. About 25,000 Canadians engage in this seasonal industry."

†In this, Charlevoix was wrong — they also made granulated sugar.

Department of Mines & Resources

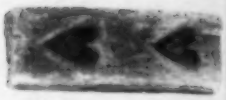
American Indians making maple syrup. From an engraving in Lafitau's Moeurs des Sauvages américains, *1724.*

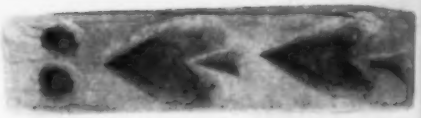
went so far as to say that maple sugar could easily drive cane sugar off the market . . . The Holland Line Company was anxious to build up a great maple sugar industry in New York." The Boon experiment near Fort Stanwix (about 1790) was carried out with energy and thoroughness, and the account of it now provides interesting reading. Failure came to the patriots because their business methods were too advanced for the primitive equipment at hand. Sugar-making was bound long to remain a home industry for little family groups scattered over a vast territory. While Benjamin Rush was promoting his scheme in the northeast, Antonio Mendez was successfully introducing sugar-cane plantations at New Orleans, and Etienne de Bore had found a means for making granulated sugar. Beet sugar soon after entered the picture in the State of New York. The demand for sugar was more readily met by the south than by the north.

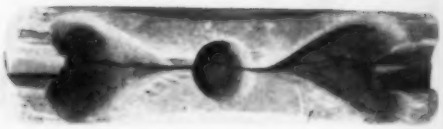
Whereas the production of maple sugar in Quebec, after 1790, was slowly growing, that of the United States reverted to such a low ebb that the Commissioner of Agriculture at Washington, in his Report for 1870, could state that the "Winnebagoes and Chippewas (of the Great Lakes) are the largest manufacturers, the former often selling to the North West Fur Company fifteen thousand pounds in the year," the New Englanders being overlooked altogether. So the progress of maple-sugar manufacture in Vermont and New Hampshire, now the heaviest producers in the United States, is comparatively recent.

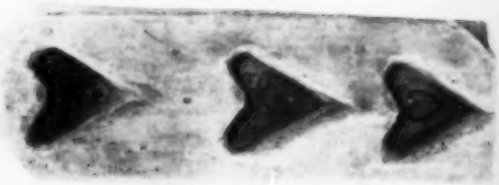
The use of maple sugar as a staple along the St. Lawrence before 1790 remained relatively unimportant for all except the sugar-makers. This is plainly shown by the expense accounts of such public institutions

RELICS OF OLD TIME SUGAR MAKING







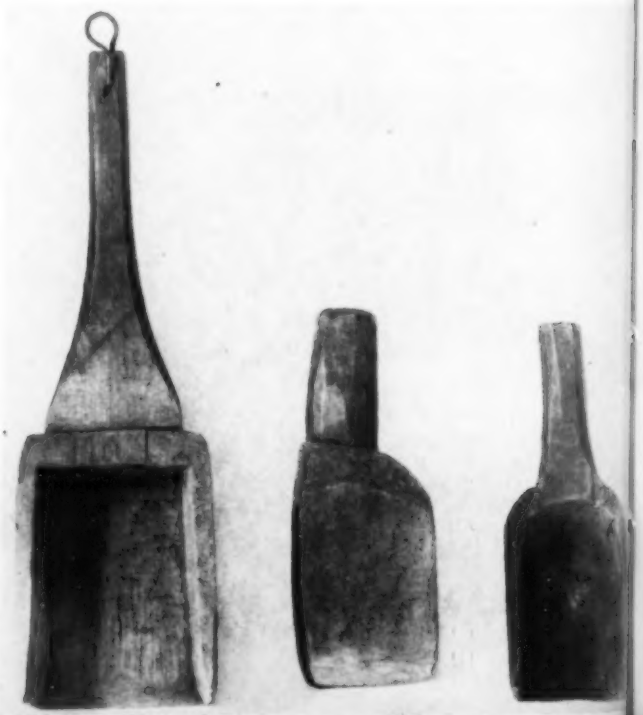


Above:—Ancient Huron-Iroquois "mocock" or elm-bark vessel from the Detroit River region. Granulated maple sugar was kept in these.

At right:—Early moulds for maple sugar used on the Island of Orleans, Quebec.

Below:—Elm-bark vessels for the maple sap, used by the Iroquois of Ontario.

Below right:—These scoops were used in handling hot maple sugar.



as the Hôpital Général, the Hôtel-Dieu, in Quebec, and even of a rural school — the Couvent de Sainte-Famille on the Island of Orleans.

The first mention of maple sugar in the accounts of Hôpital Général, Quebec, dating back to 1714, is: "A Mr Tessié pour 4 livres de sucre d'eau de Rable" (To M. T. for 4 pounds of sugar from the water of maple — the word *érable* is misspelt); the next entries ("sucre dérable") for the same institution are dated 1722, 1725 for just a few pounds. No other maple-sugar item appears on the accounts of those three institutions in the course of the next fifty years.

Only at the time when efforts in the United States were made to industrialize maple-sugar making do we begin to notice the change in favour of the native product which in the next fifty years would gradually reduce the bias so far prevalent in favour of importations. Even though a fair amount of maple sugar was produced and marketed yearly in Quebec after 1800, and the industry, after spreading to many parts, became a typical "habitant" activity, it did not reach impressive proportions until the end of the century. The producers were beset by difficulties, because of primitive Indian methods never materially improved, and because of the lack of an outlet to absorb the surplus. Moreover, the bulk of the sugar, through the carelessness of most makers, was not suitable for commercial purposes.

"To boil the sap under the open sky," an old sugar-maker recently explained, "we used three kettles hanging from poles resting on forked posts, two behind and one forward. A 'hell-fire' (*feu d'enfer*) had to be kept up day and night; otherwise the sap overflowed the vessels, and the barrels full of water might turn sour on us. And the rain occasionally made the work a trying affair. When, in a kettle over a slow fire, the syrup was being reduced to sugar — granulated, or in cakes, or in wax (*tire*) — it was apt at any moment to run over. A piece of pork as a preventive always hung just over the boiling liquid; and as soon as the bubbles reached it, its melting fat at once calmed the turmoil. But the lump itself often dropped off its hook and messed up the kettle-full. The lot of the sugar-maker who took his work in earnest was by no means rosy, and a habitant and his family had to toil very hard to harvest, say, 500 pounds in the best season."

The same sugar-makers can now, with improved equipment and methods, in a sugar-bush of 2,000 trees, make as many pounds of sugar as they have trees. And with modernized equipment production and quality is being improved yearly. Not a few in Beauce County tap from 2,000 to 6,000 trees annually. This harvest, readily marketed at 40 cents or more per pound of sugar, or about $4 per gallon of syrup, in a season when little else could profitably be done, is truly a blessing; indeed, it is the most substantial cash income in the year for such

Fresh maple-sugar cone in birch bark, typical of the early days. From Petite Rivière Saint-François, Charlevoix County, Quebec.

At left: — The old-fashioned sugar camp of the Lessards, St. Joachim de Montmorency, Quebec. The sap which they have collected is poured into a storage vat near the outdoor boiling kettle.

Above:—Boiling down the maple sap in an outdoor iron kettle.

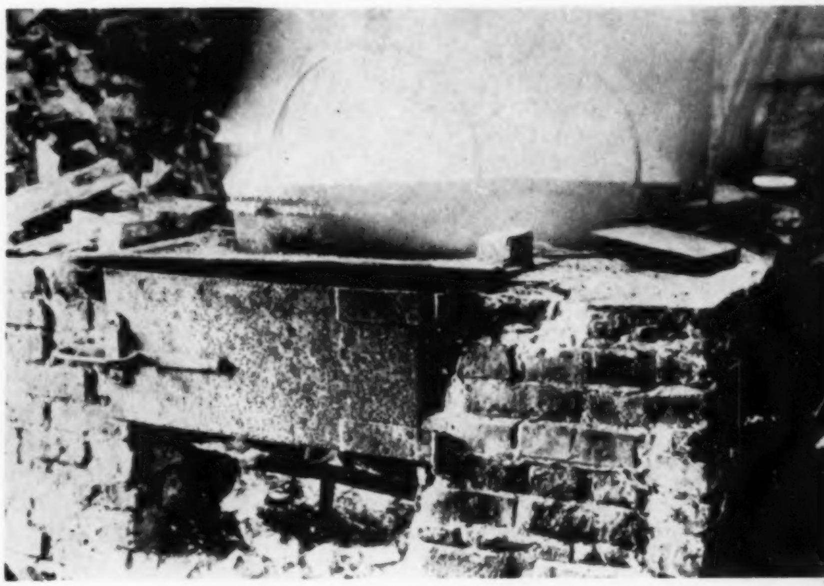
At right:—Iron kettle and apparatus at Lessard sugar camp.

counties as Beauce and its neighbours in the Eastern Townships of Quebec.

The local diversity of tools, vessels, equipment, and camping accommodation, because of the former lack of standardization, is more interesting than most people realize, and is well worth studying, not to mention representation in our museum collections. The Iroquois and Huron Indians utilized elm bark vessels; some of these, used to store granulated maple sugar, were called *mococks*. Birch bark served the same purpose among the Algonkins, their equivalent of the *mocock* being the *ouragan*. The Iroquois at first boiled the sap in earthen pots of their own make, but when they obtained brass kettles from the French, their labour was made much easier. The French and the other settlers followed the Indian methods with little improvement for nearly two hundred years. Then came the period when the special needs of the industry attracted the attention of tinsmiths and iron-founders who, after 1880, began to design new boilers and vessels to collect the sap and handle the syrup. Their ingenuity is shown in their

At right: "Habitant" Lessard, dressed in homespuns, stands watch over the kettle of maple sap as it is boiled down. The pile of hard wood behind him may be used up, but a fresh pile will be left at the camp, ready for the next spring.

Photographs by Morel.

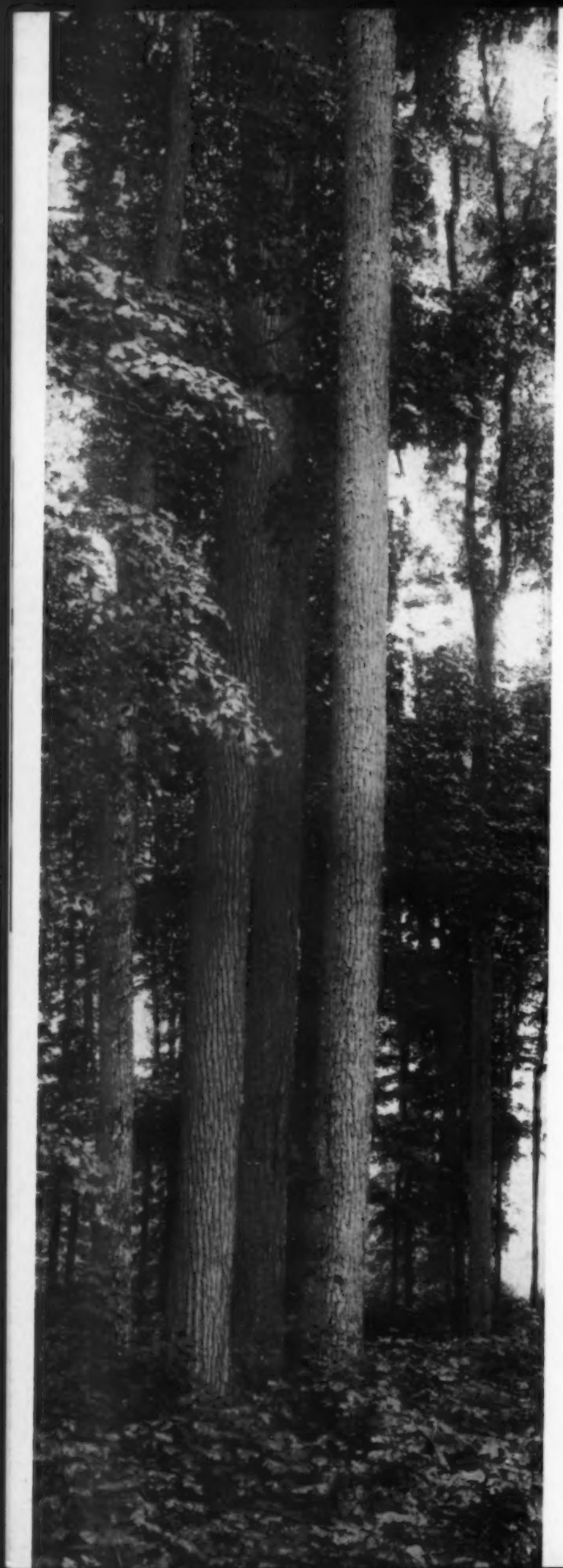


Above:—Old-fashioned kettles and fire box of brick.

At left:—Home-made tubs and barrels for the sap and syrup.

handiwork — the various types of cast-iron kettles, the pot-hooks, the fixed or revolving racks, in the evolution of stone and brick stoves or arches to hold up the cauldrons and the shallower square pans of galvanized tin-sheet with side handles, in the varied moulds — some of them with fanciful carvings — for making the sugar into cakes large or small. The latest contrivances are patented evaporators with automatic discharge pipes.

The types of camp varied according to the location of the sugar bush. The Ojibways of the Great Lakes and the Wyandots of the Detroit River migrated in family groups from their winter hunting grounds or their villages to the sugar groves in the early spring, and there they resided for a time under bark "wigwams" or, in the colonial period, in log huts that sheltered them while sap-boiling was done outside or under a lean-to. Some of the Scottish folk in Glengarry County still use open round kettles under a lean-to close to the permanent house, as the maple bush is small and close at hand. The larger sugar producers along



the Chaudière valley, in Beauce County, Quebec, as a rule have their extensive maple woods next to each other a mile or so away from the house, at the far end of their long, ribbon-like farms. They leave their homes in the morning and come back at night; but someone has to stay overnight at the sugar bush to keep the sap boiling, and attend to the constant refilling of the kettles and refuelling of the fires.

Down the St. Lawrence on the south shore, in Temiscouata County and elsewhere, the sugar bush often is on timber limits fifteen or twenty miles inland. There the sugar-makers, on an appointed day early in the spring, gather (or used to) in a band — men, women, and some of the boys — and with their baggage and provisions on sleighs, start walking towards the forest in Indian file to the tune of a marching song by their leader. They stay in their individual camps for weeks, until the season is over and their work of cutting up wood for the next season is finished. Here, still more than in Beauce County, the sugar-makers usually gathered at night in each other's camps, to sing folk songs, tell fantastic tales, and yield themselves to a phase of forest life that remained primitive, Indian-like.

If the commercial production of maple sugar and syrup, as it figures in yearly government statistics, chiefly centres in the Quebec districts south of the St. Lawrence between Montreal and Quebec, in Vermont, eastern Ontario, and New Hampshire, it is nonetheless of some importance outside these areas. In New Brunswick, 200,000 trees are tapped, and 100,000 in Nova Scotia; in the latter province, 4,000 gallons of syrup, and 36,200 pounds of sugar were listed for 1939; and the states of New York and Pennsylvania are substantial contributors. The progress in production for Canada (according to *Talk 18, Dominion Experimental Farm, Ottawa*) is shown by figures: over thirteen million pounds for 1851, over twenty-two million for 1891; and an average now of twenty-six million pounds.

The stately Sugar Maple or "hard" maple is important as a source of lumber as well as for its sap.

E. J. Zavitz

Canadian National Railways.

SUGAR BUSH
NEW STYLE

In early days a cedar spile was inserted into the trunk of the maple tree and the sap was collected in birch-bark vessels. Nowadays aluminum spouts and covered buckets are used. One tree may be tapped in four or five places. Here a pick-up team makes a visit to collect sap from the individual buckets and take it back to the camp to be boiled down.

N.F.B.

Canadian National Railways

School of sugar making, where experiments are made to prevent maple sap contamination, and to produce better maple products for the commercial market.

The area of small production extends far beyond that of commercial exploitation, but it has shrunk considerably since the early days. The northeastern maple frontier for Quebec extends beyond Murray Bay in Charlevoix County to the southeast side of Lake St. John.* Sugar and syrup are made by the Indians of the Red Earth Reserve north of Le Pas, on the Saskatchewan River in Manitoba, from box elder or the Manitoba maple, and also by French "métis" or half-breeds at Sugar Point on the Red River, and at "Isle de Bois" in the White Horse Plain district, now St. François-Xavier, twenty-five miles west of Winnipeg. The extension of the area to the southwest, in a jagged line north and south through Kansas as far as the Oklahoma border, was implicitly vouched for by Jim Cotter, a Wyandot Indian informant of northeastern Oklahoma, in the following terms: "My mother used to tap walnut trees and maple trees around here, and box elder too." He gave descriptions of utensils and methods used in the process — dug-out troughs for the sap, a three-way incision of the tree over a hickory bark spile, and, with reference to sugar camps, added, "We camp in tents now," as if sugar-making still (in 1912) went on among his people. Elsewhere maple sugar was, or is still, made north of the Potomac, and east of the Mississippi and the Missouri.

Maple sugar and syrup — like tea, coffee, coca, cinchona (quinine), cane sugar, rubber— suggests a definite geographical background. The sugar maple belongs as exclusively to the northeastern woodlands of North America as coca does to Bolivia, and cinchona to

*The Quebec statistics for the Provincial Government mentions 11 producers of maple sugar and syrup for Chicoutimi, and a few for Lac Saint-Jean and Roberval.

Maple products from this modern plant at Plessisville will be sold in Canada as well as exported to other countries.

Photo Moderne

Peru; to such an extent is this true that *sucre d'érable* (maple sugar) in France is synonymous with Canada.

The sugar maple, a hardwood tree, cannot adapt itself to foreign surroundings and remain productive. It is not usefully transplanted to other lands, as the rubber tree has been from South America to the islands east of the Indian Ocean, for its sweet sap runs only under climatic conditions not duplicated outside its native habitat. To produce its sap, the maple requires marked seasonal changes from a cold winter to a prolonged frosty spring, during which the

A laboratory where all samples are tested under the supervision of chemists.

Canadian National Railways

A "sugaring-off" party attracts both young and old. The maple sap is boiled down until it "threads" as it is poured from a spoon onto the snow to harden. The delicious maple wax is then twisted on a stick and eagerly tasted.

snow hardens at night and softens in the daytime until it has disappeared, and the ground, frozen deep, has thawed out in the sunshine. This tree yields its harvest through a small incision on its trunk, exposed to the revivifying sun which in the course of several weeks fills out the buds on its branches. Of the several varieties of maple trees, moreover, only two are heavy producers: the sugar maple or hard maple (*Acer saccharum* Marsh), and the red maple (*Acer rubrum* L. or, in French, *Plaine*).

Other North American trees, under similar climatic conditions, produce a sweet sap that can be boiled down into syrup and made into sugar. The Indians and early settlers for this purpose tapped walnut trees, yellow birch (some sugar-makers still tap a few yellow birch around the camp), ash, and box elder. Box elder or, as it is often called, the Manitoba maple, is still a sugar producer around the Great Lakes and in Manitoba.

Springtime, in the districts where maple sugar is made, is the season of the year that is most welcome and most joyously greeted. The running of the sap is not only a harbinger of milder weather, of the return of birds and the rebirth of vegetation, but it brings back, to many, a substantial cash income. After a long and dreary winter symbolized by Lent, the old settlers are glad

to celebrate the coming of Easter and resurrection, in which all nature shares.

A picturesque feature of maple-sugar making in the old days was the related social implications among the Indians and their neighbours. This seasonal activity brought about a tribal migration among the natives, and a family migration among some of the settlers, as it still does in Temiscouata County, Quebec. Everywhere a spirit of fun and frolic followed the first appearance of the sap and its reduction to syrup and sugar; the custom of celebrating the event still survives in the form of picnics or "sugaring-off" parties. Religious ceremonies too, like the Blessing of the Maple, occasionally are held in some parts of rural Quebec.

While the spring activities of making maple sugar and syrup go on at an increased pace in many parts of Northeast America, scientific and industrial laboratories carry out research and experiments. They are bent upon improving the equipment and machinery for production, expanding the scope of the industry and its markets, and solving problems involved in the natural phenomena of sap running and sugar content in various trees.

Editor's Note:—For bibliography of material on the maple sugar industry, see Editor's Note-Book, page VIII.

Interested visitors watch the gathering of the sap in a sugar bush.

Cine-photographie, Quebec.

Freeing from their winter galleys
all the vassals of despair,
April's coming down the valleys
gowned in blue and silver air.
Through the cedar-scented alleys,
where the dying winter rallies,
April's coming down the valleys
with her flowing hair.

April's lips are wild with laughter;
April's eyes are full of dawns.
April runs, and, hurrying after,
color races down the lawns.
Touching torches to each rafter,
swifter than the wind, and dafter,
April comes with peals of laughter,
and her feet are fawns.

April knows a world of waking;
all her thoughts are what shall be,
Blest that hour which sees her making
garments for each flower and tree.
In her fingers, cold and aching,
every seal of frost is breaking:
April and her world of waking
comes to set us free.

April speaks with cry of thunder,
and her call is not in vain.
April lifts the leaves, and under
frees the violet's purple stain.
Well she knows she did not blunder
when she rent each veil asunder
at the leaping of her thunder
and the weeping of her rain.

April, Priestess of Creation,
rise with music's living fire,
bringing song to consummation
in the world's discordant choir.
Beauty of transfiguration
teach to every man and nation
till thy spirit of elation
is the world's desire.

Wilson MacDonald.

FLOWER SERIES—PART III

Photographs and Notes by W. V. CRICH

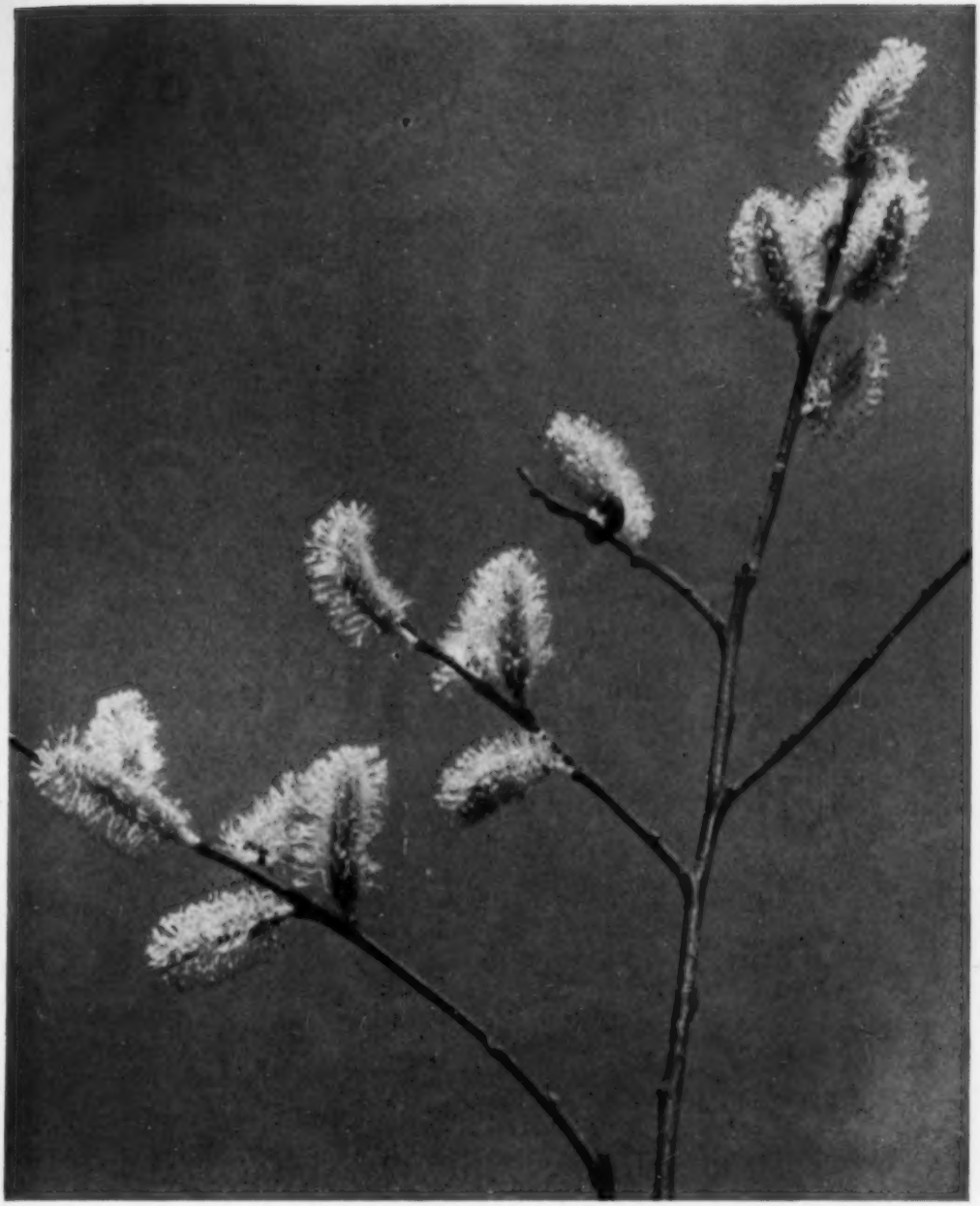
HOBBLE-BUSH or VIBURNUM

Viburnum alnifolium

THE hobble-bush enriches the landscape twice each year: in the early summer by its beautiful flower clusters, and in the autumn by its dark red foliage.

It is a straggling shrub with (in the growing season) coarse, light-green, heart-shaped leaves. The under surface of the leaf has prominent ribs covered with rusty wool. The stalks and small branches are covered with rusty-coloured scales. The flower cluster is called a cyme, and is composed of two types of flowers. Those around the margin of the cluster are neutral, that is, they are without stamens or pistils. Their function is to advertise to insects the presence of the second type of flower in the cluster, namely the inconspicuous seed-producing flowers in the centre.

This shrub flowers during May and June and produces later on a coral red berry. Another common name for this plant is the wayfaring tree, so-called because the reclining branches often take root and trip up the inadvertent wayfarer.



GLAUCOUS WILLOW

Salix discolor

THE glaucous willow is a shrub or small tree from eight to fifteen feet high, with long, pointed leaves and slender branches. Small patches of snow are still in evidence upon the hillside and the wind is biting and raw when the glaucous willow bursts into bloom. Then there is a search along river banks and low, wet lands for this early harbinger of spring, for pussy-willow decorates many a home and is not disdained by the florist, who arranges its reddish-brown stems dotted with yellow-toned pollen-bearing blossoms with more delicate, hot-house flowers.

The first warm days of spring arouse from their winter sleep numerous small bees, early butterflies, and other insects. These come in hosts to the pussy-willow, from the blossoms of which nectar and pollen are eagerly sought. In return for these provisions, the insects serve the plant by carrying pollen from the pollen-bearing blossoms to fertilize the delicate, green seed-bearing catkins. Later, the fruits split open, and the small, downy seeds are carried by the wind to establish another colony.

In the region of Toronto and other places in about the same latitude, the glaucous willow seldom reaches the size of a tree. In northern New England, however, trees with a diameter of 10 or 12 inches are often found. This species of willow may easily be recognized by its leaves. On the under surface of the young, green leaves is a whitish bloom. The leaves are irregularly toothed along the margin in the middle section but they are entire, or without teeth, at each end.

Willows are easily started from cuttings. If these are planted along a river bank, they help to prevent erosion and to hold the river within its course.

SKUNK CABBAGE

Symplocarpus foetidus

THE skunk cabbage is the first flower to bloom in the springtime in the regions in which it is found. It grows in bogs and wet places and beside brooks where the soil is rich and black. It appears as soon as the snow is gone from the ground. The leaves at this time are tightly coiled and adjacent to the purple-red, streaked and blotched, green spathe. The spathe is quite tough and leathery and its foetid odour helps to attract numerous carrion insects. These are then trapped in the coiled spathe. Within the spathe is the fleshy, soft spadix which bears the cluster of lavender-flesh-coloured flowers.

Later in the spring the large, bright green, cabbage-like leaves appear. These are from one to two feet in diameter and are heart-shaped. It is then that the characteristic skunk-like odour is most apparent. The spathe finally withers and disappears, leaving the fruit in the form of the fleshy spadix with hard, round seeds embedded just below its surface layer. These resemble the spathe in coloration, and they are sought after for food in the fall and winter by swamp-inhabiting squirrels and mice.

PITCHER PLANT

Sarracenia purpurea

THE pitcher plant is a curious and interesting plant which belongs to a group of so-called insectivorous or carnivorous plants. It is found in peat bogs and other wet places, often accompanied by sphagnum moss. The pitcher-shaped leaves, lined with fine, downward-pointing bristles, hold water in which may be found the drowned bodies of small insects. The larvae of a certain small fly subsist upon these dead insects, and this fly, in its turn, plays its role in nature by being instrumental in the cross-pollination of the flowers of the pitcher plant.

The pitcher plant produces its flowers in May and June. The petals are dull pink surrounded by beautiful madder-purple sepals.

THE CANADIAN GEOGRAPHICAL SOCIETY

ANNUAL GENERAL MEETING

The twentieth Annual General Meeting of The Canadian Geographical Society was held on February 25, 1949, in the Lecture Hall, National Museum of Canada, Ottawa. The President, Mr. C. G. Cowan, presided.

After approval of the minutes of the nineteenth Annual General Meeting, the President opened the brief business proceedings of the meeting with a report on the Society's activities during 1948. He stated that membership had increased during the year and that the finances of the Society were in excellent condition with reasonable surpluses both on general account and to the credit of the geographical research fund.

"The publication of the *Canadian Geographical Journal*," said Mr. Cowan, "continues to be the Society's main activity. A copy of the Journal goes every month to each member of the Society and in addition there is a considerable sale on newsstands, both in this country and in Great Britain. Reprints of special articles are still in demand and during the year some 465,000 reprint booklets were published. In June 1948 the first sets of Provincial Geographical Aspects booklets went on sale. They have been well received by boards of education, universities, government departments and the general public. Very favourable reviews have appeared in over forty newspapers across the country and the demand has been such that a second edition has been published. During the year a cumulative regional bibliography of articles in the Journal from 1930 to 1947 was published."

The Executive Secretary travelled some ten thousand miles during the year, he stated, visiting all the provincial capitals and Alaska, to make direct contacts with Directors and members of the Editorial Committee, chief government officers and others, in connection with the business of the Society, including arrangements for and collection of new material for future issues of the Journal. Assistance to the McGill University Summer School in Geography had been continued and two scholarships provided by the Society were again awarded. Five complete sets of Journals taken from the reserve stock were donated to libraries in Australia. In addition, copies of the Journal were sent to twenty foreign libraries which had been given sets in 1947.

The President stated that at the December 1948 meeting of the Board it was decided, after careful consideration, that in view of rising costs of publication of the Journal the annual membership fee which had remained at $3 since the organization of the Society in 1930 should be raised to $4.

The ten retiring Directors were re-elected to office for a further three-year term.

At the conclusion of the business proceedings, Mr. Cowan introduced the guest speaker, Mr. Bradford Washburn, Director of the Museum of Science at Boston. Mr. Washburn gave a colourful and informative talk on "The Conquest of Mount McKinley", an expedition which he led in 1947. He told how the party, which consisted of his wife and eleven men, spent 93 days in a wilderness of frigid peaks and glaciers, carrying out a comprehensive survey. Supported by parachuted supplies and dog sled, the party gathered complete data for a detailed map of the region, tested cold-weather equipment and made weather and cosmic ray observations—all the time fighting extreme cold and the lethargy induced by high altitude. Illustrating Mr. Washburn's talk was a series of still and motion pictures, taken in colour, which revealed the beauty and variety of the scenery encountered in the operation.

On behalf of the Society Mr. J. A. Wilson thanked Mr. Washburn for his very interesting talk and for the opportunity of seeing his excellent pictures.

Immediately following the General Meeting a meeting of the Board of Directors was held. The President and Officers of the Society were re-elected for 1949; auditors were appointed, the Editorial Committee was re-appointed, accepting with regret the resignation of Dr. Trevor Lloyd, with the addition of two new members, Dr. R. O. MacFarlane of Winnipeg and Dr. M. E. LaZerte of Edmonton, and the other Standing Committees were re-appointed.

EDITOR'S NOTE-BOOK

Marius Barbeau is well known for his many books and studies on the life and customs of the Province of Quebec. He is also a distinguished authority on the Indian tribes of Canada. This year Dr. Barbeau retired from the position of Ethnologist at the National Museum of Canada, Ottawa, the staff of which he joined in 1911. At present he is Associate Professor of Folklore, Anthropology and Human Geography at Laval University, Quebec. He has also been appointed as Research Associate in the Library of the American Philosophical Society at Philadelphia, where he will act as adviser on Indian linguistics and archives material pertaining to Canada.

* * *

N. V. K. Wylie is a native Newfoundlander, now working in Ottawa in the Department of Mines and Resources.

* * *

Wilson MacDonald was born in Cheapside, Ontario, and was educated at Port Dover, Woodstock College and McMaster University. The first poem of this renowned poet was published in 1899. In addition to his well known poetry Mr. MacDonald has written a number of plays and playlets. The new poem "April" in this issue is reproduced in Mr. MacDonald's own beautiful script.

* * *

Publications Relating To The Maple-Sugar Industry

In the United States, the U.S. Department of Agriculture is actively engaged in this field, as shown by its *Farmers' Bulletin No. 1366—Production of Maple Syrup and Sugar*. Here studies of sugar maples, sugar groves, tapping the trees, apparatus, maple sap, maple syrup, maple sugar, care of apparatus, yields, marketing and other subjects are recorded.

The National Research Council of Canada in recent years has been interested in the scientific aspects of sap running and chemical content of the sap. Some of the results of its research work were published by its specialists Elphège Bois and Aristide Nadeau in the *Canadian Journal of Research:* "Les analyses de la sève d'érable et le pouvoir-tampon" (Oct. 1936, pp. 1-4, and 195-201): "Le calcium et le manganèse dans les sèves et les sirops d'érable", by Elphège Bois, Louis-Charles Dugal, and Maurice Lessard; and "Les glucides et les glucides d'*Ipomea Batatas* et de *Solanum Tuberosum*, by Elphège Bois and Jean Savary.

M. Pierre Dansereau, of the Institut Botanique of l'Université de Montréal, has published the results of his extensive research in *Contributions de l'Institut Botanique de l'Université de Montréal*, Nos 45, 51, 60: "L'érablière laurentienne, 1. Valeur d'indice des espèces", "II Les successions et les indicateurs", "Les érablières de la Gaspésie et les fluctuations du climat".

No less active in the same pursuit, the Laboratoire de Biochimie of l'Université Laval, Québec, has contributed valuable knowledge through the labours of its specialists Elphège Bois, Louis-Charles Dugal, Maurice Lessard, and Armand Roberge. Some of their articles bear such titles as "La coulée des érables", "La sève d'érable et son pH", "Le sucrose, le glucose et le sirop d'érable", "L'extraction au chloroforme des sèves et des sirops d'érable", "Le distillant à la vapeur d'eau des sirops d'érable", "La concentration de la sève d'érable et l'addition de sucrose," (all these in the *Naturaliste canadien*, 66—1939; 67—1940; 68—1941; 69—1942), and "Le plomb dans les produits de l'érable" (*Transactions of the Royal Society of Canada*, 1939. pp. 107-112).

The Departments of Agriculture of the Dominion Government and of the Province of Quebec furnish yearly reports on the production and progress of the Canadian sugar industry. Industrial concerns also at times contribute informative booklets, for instance: "Citadelle and Camp brands . . . — The Maple Syrup Industry in the Province of Quebec", by Cyrille Vaillancourt, head of the Maple Sugar Industry Service for the Province of Quebec (issued about 1928 or 1930 24 pp.)

And the author of this article, who has collected at first hand a great deal of information and compiled a large number of early references, has published a sketch entitled "Maple Sugar: its native origin", in *The Transactions of the Royal Society of Canada*, 1946 (pp. 75-86).

Maple Sugar

Issued privately in mimeograph: *Deuxième Rapport des Travaux de Recherches sur la Provenance du Plomb dans les Produits de l'Erable*, (par) Sucrerie Expérimentale de Plessisville, Maurice Lessard, Chimiste en Charge, 7 août 1939, pp. 13. The Plessisville Experimental Sugar Grove. (The experiments at the Experimental Sugar House were made under the supervision of Mr. Maurice Lessard. Mr. Armand Roberge did the chemical analysis. Dr. Elphège Bois acted in the capacity of adviser.) (From the same source, pp. 10).

According to information recently received from Hon. C. Vaillancourt concerning the society of "Les Producteurs du Sucre d'Erable de Québec" (translated from the French): At the end of the first year of the society's activities, in 1925, 102 names of members were on the list, with a production of a ltitle less than 11,000 pounds of syrup and 93,000 pounds of sugar. In 1947 there were about 3,000 members; and the total amount of business was $1,480,000.80. Some years, as much as 12,000,000 pounds of syrup has been received.

L'Abeille et l'Erable is the monthly publication of the society. Directeur: M. C. Vaillancourt, 57 Avenue Bégin, Lévis, P.Q.

"Où va notre sirop d'érable" par G.-B. Roy, was published in *Le Bulletin des Agriculteurs*, Montreal, March 1946, pp. 12-15.

The most extensive bibliography of maple sugar is the following: Maple Sugar: A Bibliography of Early Records. H. A. Schuete and Sybil C. Schuette, in the Transactions of the Wisconsin Academy of Sciences, Arts and Letters. 29:1935, 209-236. Maple Sugar: A Bibliography of Early Records II. H. A. Schuette and A. J. Inde. Loc. cit., 30:1946 (issued December 31, 1947) pp. 89-184.

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